2008 National Emissions Inventory

Emissions Inventory System
Implementation Plan

Appendix 1
Glossary

October 3, 2008

List of Figures

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Appendix 1
Glossary

Figure A1-1
Terms

Term	Description
Activity	A quantifiable action or function used to calculate emissions for a process. Replaces the narrower term "throughput" used in NIF. Examples include material produced, fuel burned, number of persons or animals, and acreage.
Agency identifiers	Unique identifiers assigned by S/L/Ts to facility sites, emissions units, release points, and control approaches.
Agricultural fire	Fire ignited to meet specific management objectives on agricultural lands.
Alternative identifiers	Secondary identifiers from either a legacy system or other program outside the EIS stored by the EIS. These are used to maintain data links to these programs and historical data, and to assist in identifying S/L/T data when an EIS identifier is not provided.
Applicable regulation	Regulatory programs that are applied to an emissions unit or emissions process for the purpose of limiting or reducing the amount of air pollution.
Back-cast	A recalculation of historical emissions data based on new activity data or emissions calculations methods.
Biogenic emissions	Emissions from natural sources, including plants and forests.
Calculation methodology	The method used to measure, estimate, or calculate emissions.
Central Data Exchange (CDX)	EPA's gateway for receiving environmental information through the Web. Serves as the EPA node on the Exchange Network.
Component	In the EIS, a group of related elements reported together within the XML document. (In XML schema, also known as a complex type.)
Consolidated Emissions Reporting Rule (CERR)	The rule published by EPA in 2002 to update the regulatory basis for the collection of emissions inventory information.
Consolidated Emissions Reporting Schema (CERS)	The XML schema that describes the structure of the XML document for reporting emissions inventory data to multiple agency programs.
Control approach	The overall characteristics of the control system or approach (the combined set of control measures) including effective dates, capture efficiency, and effectiveness, where applied at an emissions unit or process to reduce the amount of pollutants released into the environment.
Control measure	The specific control device or practice applied to an emissions stream after capture and routing.

(cont.)

Figure A1-1
Terms (cont.)

Term	Description
Criteria air pollutants (CAPs)	Substances for which EPA has set health-based standards. There are six "criteria pollutants" of air quality: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead. Five of the six criteria air pollutants are included in EPA's emissions inventory: carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_2), particulate matter (PM10 and PM2.5), and lead (Pb). Lead is also a hazardous air pollutant (HAP).
Data category	Data that share similar EIS reporting requirements. The EIS data categories are: Facility Inventory, Point, Nonpoint, Onroad and Nonroad, and Event.
Data element	The smallest reportable piece of information in the EIS that in a database would correspond to a field.
Data type	The form with which a data element must be compliant in order to be stored properly in the EIS, such as an integer, decimal, or character.
Dataset	The entire set of data submitted to the EIS by an S/L/T for an inventory year. For example, all emissions data submitted by a State for 2008 constitutes that State's dataset. The nonpoint emissions data in that State's 2008 dataset may contain only a single value for a given County, SCC, and pollutant.
EIS Facility Inventory	The category of data used to define, relate, and integrate information on the physical location, configuration, and process of a facility site.
EIS identifiers	Unique identifiers assigned by the EIS to facility sites, emissions units, release points, and control approaches.
EIS production database	All data contained in the EIS, and a dynamic database from which the final NEI is generated.
EIS-owned data	Data that are automatically generated by the EIS, such as EIS identifiers.
Emission factor	The average rate of emissions, generally uncontrolled, per unit of activity for a given pollutant.
Emissions	The release of pollutants into the ambient air.
Emissions Inventory System (EIS)	The information system that stores all current and historical emissions inventory data. It will be used to receive and store emissions data and generate NEIs beginning with the 2008 inventory cycle.
Emissions process	An operation or occurrence that results in air emissions. Processes may occur as part of a physical emission unit, such as a boiler, or they may occur without a traditional physical emission unit, such as road dust or landfill fugitive emissions. Processes are described by SCCs.
Emission release point	The location at which emissions are released into the environment.
Emissions sector	A group of processes related and defined by a common, shared activity measure, such as Distillate Oil Combustion. An emissions sector may incorporate more than one data category, such as both point and nonpoint.

(cont.)

Figure A1-1
Terms (cont.)

Term	Description
Emissions unit	Any significant activity, stationary article, process equipment, machine, or other contrivance which emits air pollution.
Episodic emissions	The accidental or unplanned, non-routine air pollution releases that occur during a single or multiple-day episode, such as an upset, defined by a start and end date. Excludes "ozone season," "summer-day ozone-related," and "winter CO season" emissions.
Estimation methodology	See "calculation methodology."
Event emissions	Significant, reportable air emissions resulting from unexpected activities, including wildfires, controlled burns, wildland and agricultural burns, and natural disasters.
Exchange Network Header	The section of the Exchange Network message required for submitting XML data through the Exchange Network, which describes the payload (the inventory data contents) and any attachments. It contains the data submitter's name, organization, title, file creation time, comment on the inventory data contents, and contact information.
Exchange Network	A secure Internet- and standards-based approach for exchanging data. Partners on the Exchange Network establish and maintain servers called Network Nodes that are securely connected to the Internet. These nodes can act as submitters of data to other exchanges, receivers of data to be integrated into their own exchange, publishers of data to other exchanges, or some combination of the three. This EPA-controlled network of nodes layered on top of the public Internet, is used for the purpose of publishing and disseminating environmental data.
Expected pollutant	A pollutant which EPA has identified as likely to occur from an emissions process and has determined should be reported by the S/L/T. If not reported, these pollutants will be supplemented in the EIS and used for the General Purpose Release.
Facility site	A place where activities resulting in air emissions occur or have occurred in the past.
Facility source type	A classification code based upon facility emissions processes, emissions units, and associated Source Classification Codes used to characterize the type of facility associated with emissions.
Flaming emissions	The emissions from a fire that is ablaze or has an active flame.
Flaring	The burning of waste gases through a flare stack or other device before they are released to the air.
Forecast	The estimate of present or future emissions data, based on historical data.
Fugitive emissions	Air pollutants released to the air other than those from stacks or vents, including small releases from leaking plant equipment such as valves, pump seals, flanges, or sampling connections, and large open area releases such as from landfills, waste ponds, or unpaved roads.
Geographic location	The physical address and description of a facility site or an emission release point, including physical address and location description, geographical coordinates and associated MAD codes, and latitude/longitude.

(cont.)

Figure A1-1
Terms (cont.)

Term	Description
General Purpose Release	The single set of emission values selected that represent the data most appropriate for use by the general public. The set will be released at the end of the development process through the NEI Public Website.
Inventory selection	The process of identifying emissions inventory data for inclusion in the General Purpose Release, based on a combination of prioritization algorithms and individual EIAG analyst selections.
Major source	A stationary source that emits or has the potential to emit any pollutant regulated under the Clean Air Act at a significant emission rate, as defined by 40 CFR 70.
Material	The substance consumed or produced by an emissions process.
Maximum Achievable Control Technology (MACT)	The maximum degree of reduction in emissions for new and existing air pollution sources, taking into consideration cost, non-air quality health and environmental impacts, and energy requirements, as specified in Section 112d of the Clean Air Act.
Metadata	Summary information about data, such as format, structure, version, or quality of the data.
Minor source	A facility site that does not qualify as a major source.
Mobile emissions	The emissions from motorized sources for both the onroad and nonroad data categories.
MOBILE6	The computer model used to estimate various pollutant emission factors for onroad vehicles.
Motor Vehicle Emission Simulator (MOVES)	The model developed by EPA to estimate emission for onroad and nonroad sources. This system will serve as a replacement for MOBILE6 and NONROAD models, and will be used to create future emission inventories.
National Emissions Inventory (NEI)	All of the data within the EIS data store at a particular point in time. It includes data submitted by S/L/T agencies, datasets created by EIAG, and datasets obtained from other agency sources.
NEI Input Format (NIF)	NEI Input Format Version 3.0. The format used to report NEI data in 2002.
Node	A web server that facilitates the interface between database systems and the Exchange Network. It is a partner's "point of presence" on the Exchange Network. Occasionally referred to as "network node" or "Exchange Network Node."
Node client	The software program that provides integration with the Exchange Network Directory Service (ENDS). Within the node client, the user selects a dataflow, enters the dataflow, enters authentication information, and then uses Exchange Network and CDX services.
Nonattainment area	A geographic area that fails to meet, for a specified criteria pollutant, the National Ambient Air Quality Standards.
Nonpoint emissions	Emissions from stationary sources or from diffuse stationary sources for which emissions have not been submitted as point sources.

(cont.)

Figure A1-1
Terms (cont.)

Term	Description
Nonroad sources	Vehicles and equipment that operate off public roadways or highways. This includes vehicles used on roads for transportation of passengers or freight. Nonroad sources include vehicles, engines, and equipment used off highways for construction, agriculture, transportation, recreation, and many other purposes.
Official submission	The current data values for a given inventory cycle that an S/L/T has submitted to the EIS Production Environment at the close of the submission window.
Onroad sources	Vehicles used on roads for transportation of passengers or freight, also called "on-highway."
Operating parameters	The variable operating times, materials being consumed or produced, and operating status for a given emissions process or emissions unit for a specific reporting period.
Operating status	The conditions under which the facility site or the emissions unit was operating during the time emissions were reported.
Point emissions	The emissions released from a facility that is included in the EIS Facility Inventory.
Pollutant	An emitted substance that is regulated or monitored for its potential to cause harm to the health of individuals or to the environment.
Pollutant coverage	The minimum set of expected pollutants that EPA has identified as likely to occur from an emissions sector or SCC, and that should therefore be included in an emissions inventory submission.
Prescribed fire	A fire ignited on wildlands to meet a specific resource management objective such as fuel reduction or habitat restoration.
Production Environment	The EIS area in which data will be stored that have been officially submitted to the EIS.
Protected data	Data that have been subjected to a high level of quality assurance by EPA and that cannot be changed by an S/L/T user through the usual edit process. Examples include latitude and longitude for large industrial or electric generating sources which have been validated for a special study.
Public data	The data available to the general public through the NEI public website.
Quality Assurance Environment	The EIS area in which data are stored temporarily by a submitter for evaluation and checking prior to submission.
Release point	The location (defined optionally by geographic coordinates) at which pollutants are released into the environment, either via a stack or fugitive release.
Reporting entity	The S/L/T agency, or its delegate, that has the responsibility for reporting emissions for a geographically defined area.
Reporting period	The timeframe for the reported activity and/or emissions.
Routine emissions	The pollutant releases that result from a normal, planned emissions process and its operation.
S/L/T	State, Local, or Tribal jurisdiction.
S/L/T fully-owned data	The Facility Inventory data that may at any time be changed by the responsible jurisdiction, such as Facility Site Identifier or Facility Site Name.

(cont.)

Figure A1-1
Terms (cont.)

Term	Description
Smoldering emissions	The emissions from a fire that has been extinguished or that is barely spreading.
Source Classification Code (SCC)	The code that EPA uses to characterize an emissions process. All emissions in the inventory are associated with an SCC.
Speciation	The process of disaggregating inventory pollutants into individual chemical species or species groups.
Stack	A chimney, smokestack, or vertical pipe that discharges pollutants.
Stakeholder	An organization or group of persons who would participate in, be affected by, benefit from, or be burdened by a system or process.
Stationary combustion	Burning of fuels to generate electricity, steam, heat, or power in stationary equipment such as boilers, turbines, reciprocating engines, or furnaces.
Submittal data block	A group of data elements that must be submitted together within a single batch submission. Any data element that appears within a submittal data block must be submitted in the batch file along with the rest of its block.
Supplement	To enlarge a dataset by filling in the missing data with values.
Tag name	The physical name of the data element that adheres to EPA's data standards for XML. In almost all cases, this is the same name as the data element, but with all spaces removed.
Throughput	The term used in NIF 3.0 which has been superseded in the EIS by the broader term "activity."
Vent	A hole for the escape of gas or air.
Wildfire	An unwanted, non-structural fire often set by lightning or arson.
Wildland fire use	Wildfires managed for resource objectives.
XML document	A file containing data organized into a structured document using XML markup.
XML schema	Defines the structure of an XML document and the set of rules to which it must conform in order to be considered valid.

Figure A1-2
Acronyms

Acronym	Description
AERR	Air Emissions Reporting Requirements.
AQAD	Air Quality Assessment Division (of EPA's Office of Air, OAQPS, located in RTP, NC). Develops and makes decisions on air quality management policy and accountability. Responsible for the development of emissions inventories and for determining the progress of reduction programs.
AQAG	Air Quality Analysis Group (of EPA's Office of Air, OAQPS, located in RTP, NC). Tracks and analyzes air quality data for policy and program development, evaluation, and accountability.
AQMG	Air Quality Modeling Group (of EPA's Office of Air, OAQPS, located in RTP, NC). Directs pollution modeling and modeling techniques.
AQPD	Air Quality Policy Division (of EPA's Office of Air, OAQPS, located in RTP, NC). Manages policies and strategies related to air quality management, including determining nonattainment areas.
AQS	Air Quality System. EPA's repository of ambient air quality data, AQS stores data from over 10,000 monitors, 5000 of which are currently active.
ARP	Acid Rain Program. A national sulfur dioxide and nitrogen oxides air pollution control and emissions reduction program established in accordance with Title IV of the Clean Air Act.
ASCII	The American Standard Code for Information Interchange. A standard text file format that contains alphanumeric characters.
BFCC	Basic Format/Content Checker. A desktop tool used to check data for the 2002 inventory cycle.
BTS	Bureau of Transportation Statistics.
CAA	Clean Air Act.
CAIR	Clean Air Interstate Rule. Rule to reduce the interstate transfer of fine particulate material and ozone by establishing State-level caps on SO_2 and NO_X.
CAMD	Clean Air Markets Division (of EPA's Office of Air, OAP, located in Washington, DC). Administers several market-based regulatory programs designed to improve air quality, including EPA's Acid Rain Program.
CAP	Criteria air pollutant.
CAS	Chemical Abstract Service. Provides information on chemical properties and interactions.
CDX	Central Data Exchange.
CE	Control equipment table, used in NIF 3.0 for 2002 and 2005 NEI submittals.
CEMS	Continuous Emissions Monitoring System. A system that samples, analyzes, measures, and provides a permanent record of a pollutant emission rate by in-stack readings taken on a periodic basis.
CERR	Consolidated Emissions Reporting Rule.
CERS	Consolidated Emissions Reporting Schema.

(cont.)

Figure A1-2
Acronyms (cont.)

Acronym	Description
CHIEF	Clearing House for Emission Inventories and Emission Factors.
CMSA	Consolidated Metropolitan Statistical Area.
CROMERR	Cross-Media Electronic Reporting Rule. Defines the standards for electronic reporting to EPA.
DOE	U.S. Department of Energy.
DOT	U.S. Department of Transportation.
EGU	Electric generating unit.
EIA	Energy Information Administration (of DOE).
EIAG	Emission Inventory and Analysis Group (of EPA's Office of Air, OAQPS, located in RTP, NC). Develops and maintains the NEI and provides analysis and interpretation of emissions data and trends.
EIS	Emissions Inventory System. EPA's information system that stores all current and historical emissions inventory data. It will be used to receive and store emissions data and generate emissions inventories beginning with the 2008 cycle.
EM	Emission table used in NIF 3.0 for 2002 and 2005 NEI submittals.
EN	Exchange Network.
EP	Emission process table used in NIF 3.0 for 2002 and 2005 NEI submittals.
EPA	U.S. Environmental Protection Agency.
ER	Emission release table used in NIF 3.0 for 2002 and 2005 NEI submittals.
ERT	Emission Reduction Technique.
EU	Emission unit table. A table used in NIF 3.0 for 2002 and 2005 NEI submittals.
FETS	Fire Emissions Tracking System. Developed by the Western Regional Air Partnership.
FHA	Federal Highway Administration.
FIPS	Federal Information Processing Standards.
FIRE	Factor Information Retrieval Data System. The database management system containing EPA's recommended emission estimation factors for criteria and hazardous air pollutants.
FITS	Facility Identification Template for States.
FRS	Facility Registry System. EPA's database of all facilities which are of environmental interest.
FTP	File Transfer Protocol.
GHG	Greenhouse gases.
GIS	Geographic information system.
GPRA	Government Performance Results Act. Requires agencies to develop plans for what they intend to accomplish, measure how well they are doing, make appropriate decisions based on the information they have gathered, and communicate information about their performance to Congress and to the public.

(cont.)

Figure A1-2
Acronyms (cont.)

Acronym	Description
HAP	Hazardous air pollutant.
HEID	Health and Environmental Impacts Division (of EPA's Office of Air, OAQPS, located in RTP, NC). Responsible for the range of tasks related to the interaction between human health and air pollution. Determines the National Ambient Air Quality Standards and Emissions Reduction Standards.
ICR	Information Collection Request.
IPM	Integrated Planning Model.
ITEP	Institute for Tribal Environmental Professionals.
LADCO	Lake Michigan Air Directors Consortium.
LTO	Aircraft landing and takeoff.
MACT	Maximum Achievable Control Technology.
MAD	Method Accuracy and Description codes.
MARAMA	Mid-Atlantic Regional Air Management Association. An RPO consisting of mid-Atlantic states.
MOVES	Motor Vehicle Emission Simulator.
MSA	Metropolitan Statistical Area.
NADG	National Air Data Group (of EPA's Office of Air, OAQPS, located in RTP, NC). Manages the design, operation, maintenance, and improvement of databases and information systems that assist air programs.
NAICS	North American Industry Classification System Code.
NATA	National Air Toxics Assessment.
NCC	National Computer Center for EPA, located in RTP, NC.
NCD	NMIM County Database. The database of default activity used by NMIM to generate calculated emissions for onroad and nonroad sources.
NEI	National Emissions Inventory.
NEON	NEI on the NET. EPA internal query reporting system for the National Emissions Inventory.
NESCAUM	Northeast States for Coordinated Air Use Management. An RPO consisting of Northeast states.
NIF 3.0	NEI Input Format Version 3.0.
NMIM	National Mobile Inventory Model. Developed by EPA to estimate current and future emission inventories for onroad motor vehicles and nonroad equipment.
NOF	NEI Output Format. Previous format used for distribution and publishing NEI data.
NONROAD	Computer model that calculates past, present, and future emission inventories for all nonroad equipment categories except commercial marine, locomotives, and aircraft.

(cont.)

Figure A1-2
Acronyms (cont.)

Acronym	Description
NO$_X$ SIP call	NO$_X$ State Implementation Plan call. A regulatory action taken by EPA in 1998 that requires significant NO$_X$ reductions in a 22-State area in the eastern U.S., and that allows for an interstate trading program as one method of achieving the necessary reductions.
NSPS	New Source Performance Standard. A standard for an industrial or source category, as published in 40 CFR Part 60 of the CAA, limiting pollutant levels from new stationary sources.
NTI	National Toxics Inventory. The NTI database is an inventory of stationary and mobile sources that emit hazardous air pollutants in all 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands. It is now part of the NEI.
OAQPS	Office of Air Quality Planning and Standards (of EPA's Office of Air, located in RTP, NC). Develops national air quality standards, develops programs to address pollution, and assesses the performance of air pollution control programs.
OECA	Office of Enforcement & Compliance Assurance (of EPA).
OEI	Office of Environmental Information (of EPA).
OID	Outreach and Information Division (of EPA's Office of Air, OAQPS, located in RTP, NC).
OPSG	Ozone Policy & Strategies Group (of EPA).
ORIS (or ORISPL) code	A plant identification number assigned by the Energy Information Administration (EIA) that is used to identify plants for the Acid Rain Program.
OTAQ	Office of Transportation and Air Quality (of EPA's Office of Air, located in Ann Arbor, MI). Responsible for the modeling and regulation of onroad and nonroad mobile source emissions.
PE	Period emission table used in NIF 3.0 for 2002 and 2005 NEI submittals.
PSD	Prevention of Significant Deterioration.
PTE	Potential to Emit.
QA	Quality assurance. The process of determining the accuracy and quality of emissions data.
RO	EPA Regional Office. Plays a key role in any process involving S/L/T air program activities and requirements. Acts as an intermediary for EPA Headquarters.
RPO	Regional Planning Organization. Organizations sponsored by EPA to address visibility impairment from a regional perspective. Examples of RPOs include WRAP and VISTAS.
RTP	Research Triangle Park.
SCC	Source Classification Code.
SI	Site table, used in NIF 3.0 for 2002 and 2005 NEI submittals.
SIC	Standard Industrial Classification (code). The Department of Commerce economic end-product identifier, which has been replaced by NAICS.
SIP	State Implementation Plan. The combined set of regulations, permits, and other enforceable measures that a State uses to demonstrate that it will meet a National Ambient Air Quality Standard.
SMOKE	Sparse Matrix Operator Kernel Emissions Model.

(cont.)

Figure A1-2
Acronyms (cont.)

Acronym	Description
SOA	Service-Oriented Architecture. A collection of standards-based web services that use a common messaging technology.
SPPD	Sector Policies and Programs Division (of EPA's Office of Air, OAQPS, located in RTP, NC). Develops emission reduction strategies.
SQL	Structured Query Language.
TRI	Toxic Release Inventory. An EPA dataset that contains information about more than 650 toxic chemicals that are being released into the environment.
USPS	United States Postal Service.
UTM	Universal Transverse Mercator. A grid-based method of specifying locations on the surface of the earth.
VISTAS	Visibility Improvement State and Tribal Association of the Southeast. An RPO consisting of Southeast states and tribes.
VMT	Vehicle miles traveled. The total number of miles traveled in a given period of time by a given vehicle or fleet of vehicles. When combined with pollution rates per mile traveled, it provides an estimate of the total amount of vehicle pollution in a given period of time.
WRAP	Western Regional Air Partnership. An RPO consisting of Western states.
XML	Extensible Markup Language.

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